Interfacing Lutron RadioRA 2® Systems with Honeywell Vista-128BPT Security Systems

revision A

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Overview
RadioRA 2® is capable of direct integration with the Honeywell Vista-128BPT security panel. Integrating RadioRA 2 with a security system enables many new features beyond intrusion alert. By incorporating lighting control, shades, temperature, and small appliance control, RadioRA 2 offers energy savings, convenience, and ambiance that the homeowner can enjoy every day.

Required components
In order to interface RadioRA 2 with a Vista-128BPT security panel, you will need the following items:

- RadioRA 2 system installed
- RadioRA 2 programming software version 5.0 or higher.
- Honeywell Vista-128BPT security panel installed and programmed (to enable the extra settings to allow integration—not covered in the Honeywell instructions—see Appendix 2)
- Null Modem Serial cable or straight-through Serial cable with a Null Modem adapter
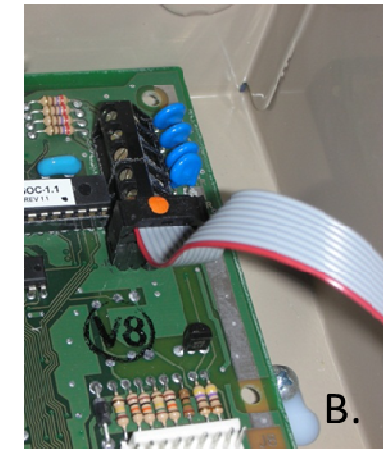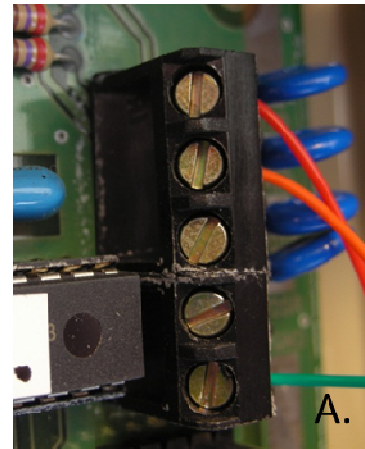
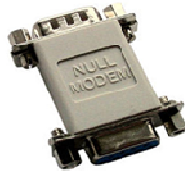# Wiring

1 **Honeywell Vista-128BPT**
(Integrated RS232)
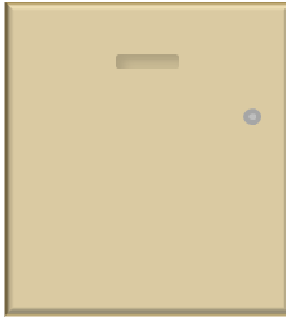
Either…

A. Connect flying leads directly to the terminal block (TB4) on the Honeywell Vista-128BPT circuit board, or

B. Purchase the VT-SERCBL cable, which adapts the 10-pin header (J9) on the VISTA to a standard DE9M serial connector

A.

B.

2 **Null Modem Adapter w/ Straight-through Cable**

Null Modem Serial Cable

OR

3 **RadioRA 2® Main Repeater**
(Pictured: RadioRA 2 Main Repeater with Null Modem Adapter w/ Straight-through Cable)

Programming Overview

Programming a RadioRA 2 system to interface with a Honeywell Vista-128BPT security panel is done in four phases:

1.) Install and program the Honeywell Vista-128BPT security system according to Honeywell instructions.
2.) Program the Vista-128BPT to enable the extra settings to allow the integration, not covered in the Honeywell instructions (see Appendix 2).
3.) Install and program the Lutron RadioRA 2 system using RadioRA 2 programming software version 5.0 or higher.
4.) Program appropriate phantom buttons associated with each security action, as described in the following section.

Programming Phantom Buttons for Security

Actions in the Honeywell Vista-128BPT security panel will send RS-232 commands to the RadioRA 2 system. Each command is associated with a specific phantom button, and each phantom button may be programmed to deliver a desired scene. When a command is received from the security system, the corresponding phantom button is automatically "pressed". For certain buttons, a Time of Day feature has been pre-programmed so that the most appropriate action takes place.

The RadioRA 2 Main Repeater has 100 phantom buttons available for use with integration. Buttons 76-100 are configured to receive commands from the Honeywell Vista Turbo system. Table 1 shows how each security action is associated with RadioRA 2 phantom buttons and Table 2 offers a recommended scene for each phantom button. The Time of Day, when various actions will take place, is also specified. Table 3 provides a timeline illustrating how the RadioRA 2 system will automatically respond to various security commands throughout the day.

Note: If the Honeywell Vista-128BPT system has no partitions, use phantom buttons associated with partition 1. See Table 2 for the phantom button to partition mapping.

Table 1: Security Actions and associated Phantom Buttons (Partition 1)

This table illustrates the various possible actions from a security system and the phantom buttons they will activate depending on Time of Day. The recommended phantom button scene name is also matched to the phantom button number.

Security Action	Time of Day	Phantom Button(s) Activated	Phantom Button Scene Name
Arm Away	Day	95 + 92	Away Scene + Away Timeclock Mode
	Night	95 + 92	Away Scene + Away Timeclock Mode
Arm Stay	Day	-	-
	Night	93	Goodnight
Disarm	Day	92 turned off	(Away Timeclock turned off)
	Night	92 turned off; 94	(Away Timeclock turned off); Welcome
Intrusion	Day	98 + 99	Exterior Flash, Interior Full
	Night	98 + 99	Exterior Flash, Interior Full
Emergency	Day	100 + 98	Emergency, Exterior Flash
	Night	100 + 98	Emergency, Exterior Flash

Table 2: Phantom Buttons and Recommended Programming

This table provides the recommended programming for each phantom button associated with security on the Main Repeater.

Phantom Button	Security System Partition	Button Type	Recommended Scene	Recommended Programming Lights	Shades	HVAC	Plug-in Modules	Time Clock
100	All	Single/Multi-room scene	Emergency*	Interior lights at 25%	Open	-	-	-
99	All	Security mode	Interior Full	Interior lights at 100%	Open	-	-	-
98	All	Security mode	Exterior Flash	Exterior lights flash	-	-	-	-
97	All		Reserved for future use	-	-	-	-	-
96	All		Reserved for future use	-	-	-	-	-
95	1	Single/Multi-room scene	Away Scene	Lights off (delayed off on exit pathway)	Close	-	Off	-
94	1	Single/Multi-room scene	Welcome	Entry, foyer, kitchen lights on to 75%		-	-	-
93	1	Single/Multi-room scene	Goodnight	Evening light levels	Close	Set Back	Off	-
92	1	Timeclock mode	Away Timeclock Mode	-	-	Set Back	-	Away Mode
91	1		Reserved for future use	-	-	-	-	-
90	2	Single/Multi-room scene	Away Scene	Lights off (delayed off on exit pathway)	Close	-	Off	-
89	2	Single/Multi-room scene	Welcome	Entry, foyer, kitchen lights on to 75%		-	-	-
88	2	Single/Multi-room scene	Goodnight	Evening light levels	Close	Set Back	Off	-
87	2	Timeclock mode	Away Timeclock Mode	-	-	Set Back	-	Away Mode
86	2		Reserved for future use	-	-	-	-	-

Phantom Button	Security System Partition	Button Type	Recommended Scene	Recommended Programming				
				Lights	Shades	HVAC	Plug-in Modules	Time Clock
85	3	Single/Multi-room scene	Away Scene	Lights off (delayed off on exit pathway)	Close	-	Off	-
84	3	Single/Multi-room scene	Welcome	Entry, foyer, kitchen lights on to 75%		-	-	-
83	3	Single/Multi-room scene	Goodnight	Evening light levels	Close	Set Back	Off	-
82	3	Timeclock mode	Away Timeclock Mode	-	-	Set Back	-	Away Mode
81	3		Reserved for future use	-	-	-	-	-
80	4	Single/Multi-room scene	Away Scene	Lights off (delayed off on exit pathway)	Close	-	Off	-
79	4	Single/Multi-room scene	Welcome	Entry, foyer, kitchen lights on to 75%		-	-	-
78	4	Single/Multi-room scene	Goodnight	Evening light levels	Close	Set Back	Off	-
77	4	Timeclock mode	Away Timeclock Mode	-	-	Set Back	-	Away Mode
76	4		Reserved for future use	-	-	-	-	-

Table 3: Security Programming Timelines

When configured according to this tech tip, the RadioRA 2 system will automatically respond to commands from the security keypad as outlined in the tables below.

KEY

- Arm action initiated
- Disarm action initiated
- **Bold** Active events
- Grey Inactive events

Intrusion Alarm and Disarm Example

RadioRA 2 action	Daytime 6PM	Sunset 7PM	Sunset+1 hr 8PM	Sunset+2 hr 9PM	Sunset+3 hr 10PM	11PM		Sunrise 6AM	Daytime 7AM
				INTRUSION ALARM		**DISARM (Nightime - Welcome Scene)**			
Security - Interior Full				**Interior Lights on Full**		**Cancel Full**			
Security - Exterior Flash				**Exterior Lights Flash**		**Cancel Flash**			
Welcome Scene						**Outside and Entry On**	Overnight		

Arm Stay and Disarm Example

RadioRA 2 action	Daytime 6PM	Sunset 7PM	Sunset+1 hr 8PM	Sunset+2 hr 9PM	Sunset+3 hr 10PM	11PM		Sunrise 6AM	Daytime 7AM
				ARM STAY (Nightime - Goodnight Scene)					**DISARM (Daytime - no action)**
Normal Time Clock		**Outside Lights On**				**Outside Lights Dim**		**Outside Lights Off**	
Away Time Clock		Outside Lights On Foyer On	Kitchen On	Bedroom On	Kitchen Off	Outside Lights Dim Bedroom Off Foyer Dim (nightlight)	Overnight	Outside Lights Off Foyer Off	
Away Scene									
Goodnight Scene				**Evening lighting** **T-stat adjusted** **Shades lowered,** **plug-in appliance** **modules Off**					
Welcome Scene									

Arm Away and Disarm Example

|		**ARM AWAY**			**DISARM (Nightime - Welcome Scene)**			
	Daytime			Sunset	Sunset+1 hr	Sunset+2 hr	Sunset+3 hr	Sunrise
RadioRA 2 action	4PM	5PM	7PM	8PM	9PM	10PM	11PM	6AM
Normal Time Clock			Outside Lights On				**Outside Lights Dim**	**Outside Lights Off**
Away Time Clock		**T-stat set back**	**Outside Lights On Foyer On**	**Kitchen On**	Bedroom On	Kitchen Off	Outside Lights Dim Bedroom Off Foyer Dim (nightlight)	Outside Lights Off Foyer Off
Away Scene		**Inside Lights Off (30 min delay on exit pathway) Shades lowered, plug-in modules Off**						
Welcome Scene					**Outside and Entry On**			
Goodnight Scene								

Overnight

Appendix 1: Programming the Phantom Buttons

Coming soon: for more in-depth programming instructions, a corresponding Security Training Module can be found online at resi.lutron.com/radiora2 by following the RadioRA 2 Software Online Training Modules link.
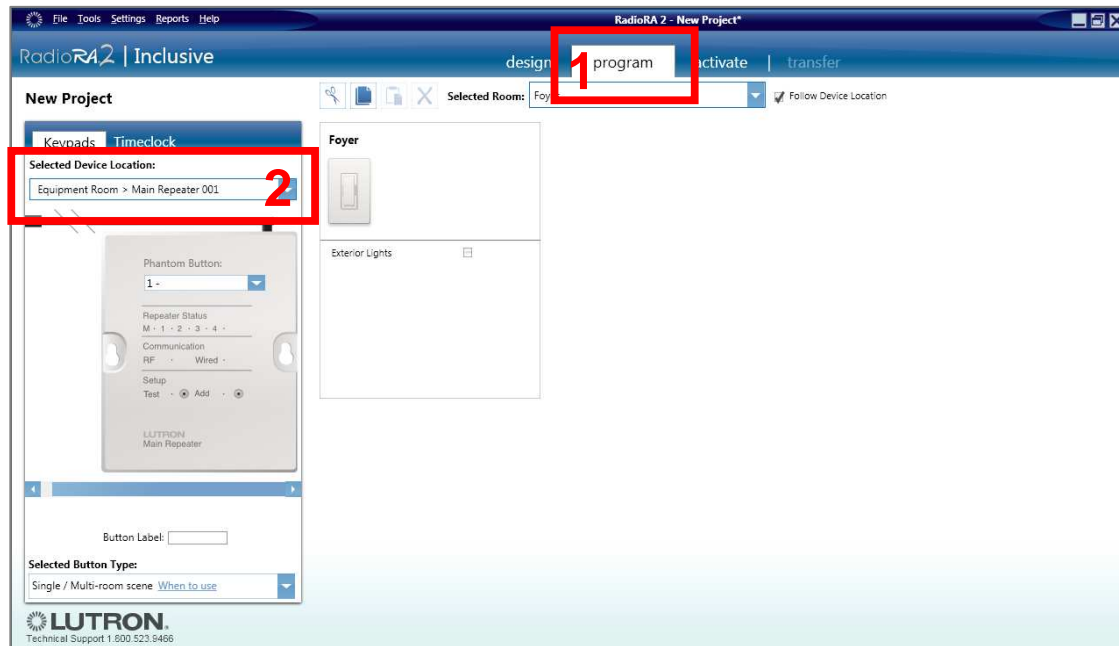
Once the project has been designed in the RadioRA 2 programming software, select the "Program" tab (**1**) and then find the Main Repeater using the "Selected Device Location" drop-down menu (**2**).
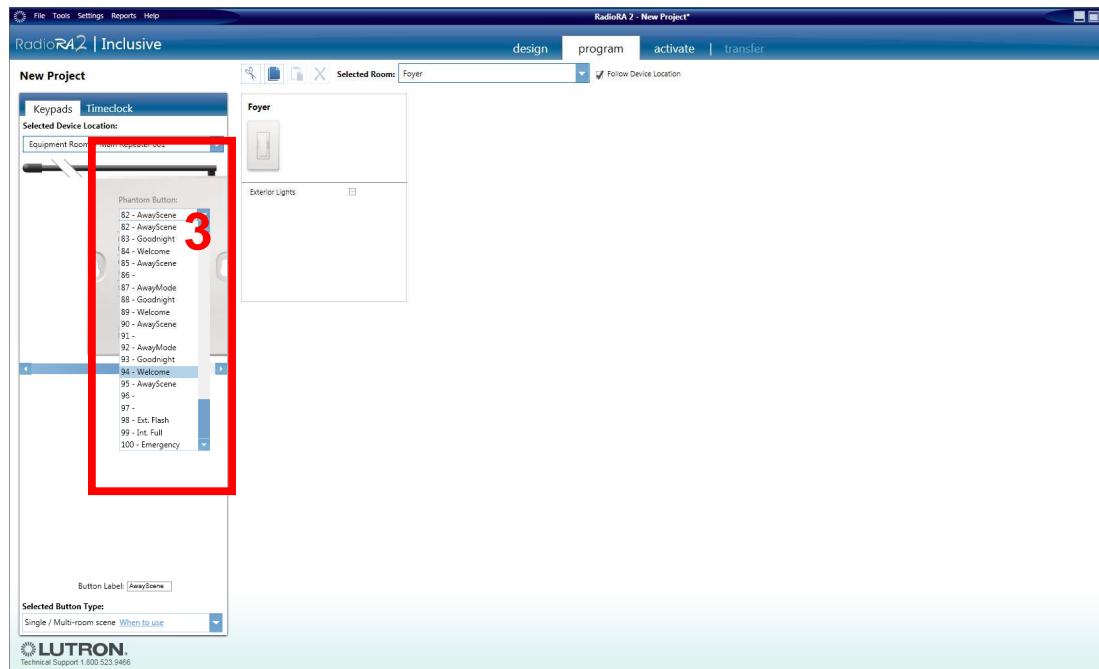
Next, select the desired button from the "Phantom Button" drop-down menu (**3**).
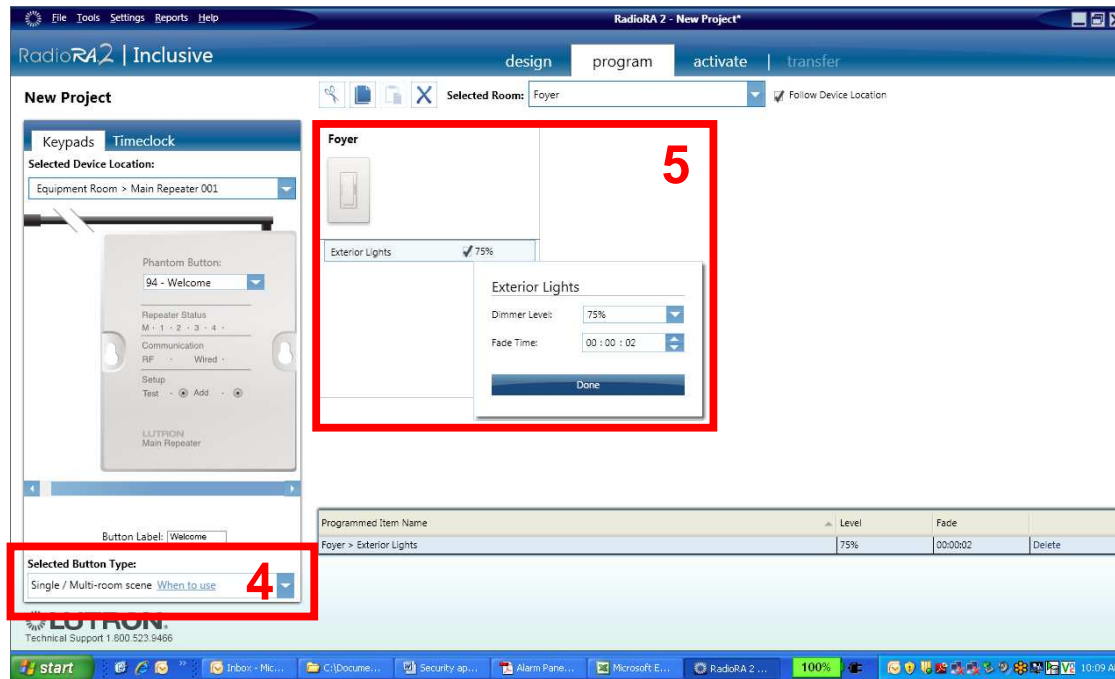
Finally, choose the appropriate "Selected Button Type" (**4**) and program devices and levels (**5**).

Remember: you must also complete the activation and transfer steps for the programming to take effect

Appendix 2: Serial Programming Options for Automation Applications

The following group of fields **must** be set to use the serial port for automation applications:

- *05 Enter 1 to send System Event Messages via RS232 port
- *14 Enter 0 to disable Home/Facility Automation Control Input
- 1*70 Event Log Types (Enter 1 in each event log type)
- 1*78 Extended Home Control Events (Enter 1 for extended)
- 1*79 Home Control Event Types (Enter 1 in each home control event type)
- 1*80 Enter 1 to improve automation performance by disabling fault/restore messages over the automation port.